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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/656,742	09/07/2000	YURIY REZNIKOV	KSU-188	1368

7590 05/30/2003
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EXAMINER

TON, MINH TOAN T

ART UNIT	PAPER NUMBER
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2871

DATE MAILED: 05/30/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/656,742

Applicant(s)

REZNIKOV ET AL.

Examiner

Toan Ton

Art Unit

2871

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 March 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,2,4-12 and 14-27 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,2,4-12 and 14-27 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

Claim Rejections - 35 USC § 103

1. Claims 1-2, 4-12, 14-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gibbons et al (US 5032009, IDS) in view of Gibbons et al (US 6407789).

Gibbons ('009) discloses a liquid crystal display device and method of making thereof comprising all (as recited in independent claims) except for the irradiating light is elliptically polarized or partially polarized.

Gibbons ('789) discloses that there exists several problems/disadvantages when using linearly polarized light, as in Gibbons ('009). Gibbons ('789) solves the problems/disadvantages through the use of partially polarized light, wherein the use of partially polarized light yields several advantages such as an increase in throughput and more effective use of optical radiation, easier to produce from coherent sources considering the range of ray angles and dimensions that the sources cover (col. 3, lines 41-47). Therefore, it would have been obvious to one of ordinary skill in the art to employ the irradiating light being partially polarized light for achieving advantages such as an increase in throughput and more effective use of optical radiation, easier to produce from coherent sources considering the range of ray angles and dimensions that the sources cover.

Gibbons ('009) discloses an alignment layer comprising anisotropically absorbing molecules having liquid crystal compounds.

Gibbons ('009) discloses exposing the anisotropically absorbing molecules to polarized light of a wavelength or wavelengths within the absorption band of the anisotropically absorbing molecules.

Gibbons ('009) discloses the molecules exposed by polarized light through at least one mask having a pattern, wherein the mask is commonly removed after exposure.

Gibbons ('009) discloses that his invention employs *conventional* liquid crystal display configuration (see Figure 1), wherein the conventional configuration comprises a pair of substrates, a liquid crystal medium sandwiched between the substrates, each substrate comprises an electrode formed thereon, an alignment layer formed at least on one of the substrates.

Depositing methods such as spin coating or dip coating are common and known in the art. Therefore, it would have been obvious to one of ordinary skill in the art to employ depositing methods such as spin coating or dip coating, as they are common and known methods in the art.

The recited thickness' range for the alignment layer is at least overlapped the known and common range in the art for yielding advantages such as achieving desirable tilting directions. Therefore, it would have been obvious to one of ordinary skill in the art to employ a thickness range that at least overlaps the known and common range in the art for yielding advantages such as achieving desirable tilting directions

The recited anchoring-surface-energy range is at least overlapped the common range (1 erg/cm² to 10⁻³ erg/cm²) for yielding advantages such as achieving desirable alignment directions. Therefore, it would have been obvious to one of ordinary skill in the art to employ an anchoring-surface-energy range that at least overlaps the known and common range in the art for yielding advantages such as achieving desirable alignment directions.

Response to Arguments

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2. Applicant's arguments with respect to all claims have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

3. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

4. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

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Contact Information

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to T. TON whose telephone number is (703) 305-3489. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 308-0956.

May 27, 2003


TOANTON
PRIMARY EXAMINER